



## Transportation Synthesis Report

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### Suicide Prevention on Bridges

*Prepared for*  
**Bureau of Highway Operations**

*Prepared by*  
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**WisDOT RD&T Program**  
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*Transportation Synthesis Reports (TSRs) are brief summaries of currently available information on topics of interest to WisDOT staff. Online and print sources include NCHRP and other TRB programs, AASHTO, the research and practices of other state DOTs, and related research and news. Internet hyperlinks in TSRs are active at the time of publication, but changes on the host server can make them obsolete.*

#### **Request for Report**

WisDOT's Bureau of Highway Operations is interested in learning about measures for preventing suicides from bridges. RD&T performed a quick scan of some of practices and research related to this issue and found the information below.

#### **Barriers**

*Effectiveness of barriers at suicide jumping sites: a case study*

Author: Beautrais A.L.

Source: [Australian and New Zealand Journal of Psychiatry](#), October 2001, vol. 35, no. 5, pp. 557-562(6)

Publisher: [Blackwell Publishing](#)

[http://www.ingentaconnect.com/search/article?jsessionid=e3frwaa5bwou.victoria?title=bridge+suicide&title\\_type=title&year\\_from=1997&year\\_to=2004&database=1&pageSize=20&index=3](http://www.ingentaconnect.com/search/article?jsessionid=e3frwaa5bwou.victoria?title=bridge+suicide&title_type=title&year_from=1997&year_to=2004&database=1&pageSize=20&index=3)

From Abstract: "Suicide safety barriers were removed from a central city bridge in an Australasian metropolitan area in 1996 after having been in place for 60 years. The bridge is a known suicide site and is located adjacent to the region's largest hospital, which includes an acute inpatient psychiatric unit. This paper examines the impact of the removal of these barriers on suicide rates... These findings appear to strengthen the case for installation of safety barriers at suicide sites in efforts to prevent suicide deaths, and also suggest the need for extreme caution about the removal of barriers from known jumping sites."

*Rio Grande Gorge Bridge Has Seen 3 Suicides So Far This Year*

Albuquerque Journal, April 10, 2005

[http://www.abqjournal.com/north/336733north\\_news04-10-05.htm](http://www.abqjournal.com/north/336733north_news04-10-05.htm)

Calling for changes:

"The bridge turns 40 this year, and, as it reaches middle age, it is due for some attention from the state's Department of Transportation, which built and maintains the structure. John McElroy, the Department of Transportation engineer for the district that includes Taos, said the bridge was put into the department's construction plan several years ago, with rehabilitation to begin in 2007. Part of the plan calls for some way of making the bridge less attractive to jumpers. The department is considering attaching some kind of fencing or extended railing above the bridge rail, although McElroy said the plans are no more specific than that... Because the bridge is on the National Historic Registry, any modification would have to pass a design review, McElroy said. 'We're potentially limited in what we can do,' he said. Besides any railing that would change how the bridge looks or the view from the bridge, engineers must look at what kind of added weight the structure could hold. And a change to the bridge would go through a public comment process. 'There may be some people who like the bridge and don't want it changed at all,' he said. The department also wants to make sure a raised railing would make a difference. 'I don't know that we could do anything that could keep someone from doing it if they're really set on it,' he said."

*The great barrier debate: Is the effort to stop bridge suicides worth \$25 million and a possible blemish on a global icon?*

San Francisco Chronicle, March 10, 2005

<http://sfgate.com/cgi-bin/article.cgi?f=/c/a/2005/03/10/MNGHOB6M91.DTL>

“Whatever (type of barrier that would go) up would have to pass a battery of tests for wind resistance and climbability and be architecturally consistent with the rest of the (Golden Gate Bridge), said Dennis Mulligan, the district's top engineer. That's an expensive proposition that has, in the past, proved to be prohibitive. In the 1970s, 18 alternative designs were studied and scale models were built of at least two of them. Then in the late 1990s a wire barrier called the Z-Clip was studied (see: [http://cfasggb.tripod.com/Suicide/ggbsbc\\_minute%201\\_25\\_99.htm](http://cfasggb.tripod.com/Suicide/ggbsbc_minute%201_25_99.htm)). Ultimately, every design was deemed ineffective, too ugly or both. One of the problems, Mulligan said, was a provision that the barriers be 100 percent effective, which, many feel, is impossible.”

*Jacques-Cartier Bridge Suicides*

CFCF/CTV News- Montreal, Dec. 3, 2003

<http://www.cfcf.ca/cfcf/news/oys&id=160>

Scroll to: 03-Dec-2003, Jacques-Cartier Bridge Suicides

“The Bloor Street Viaduct in Toronto once had a similar problem – it was worse than Jacques-Cartier. But they installed barriers and the number of suicides went down. The barriers consist of an outer and an inner array, spaced five inches apart to prevent anyone from going through. They're tensioned so they cannot be moved laterally.”

### **Crisis counseling phones, bridge patrols, security cameras**

*Pennsylvania State Police 2003 Annual Report*

[http://www.psp.state.pa.us/psp/lib/psp/PSP\\_Annual\\_Report\\_2003.pdf](http://www.psp.state.pa.us/psp/lib/psp/PSP_Annual_Report_2003.pdf)

pdf page 27

Clark Summit Bridge Suicides:

“An ongoing problem had been identified involving suicides/jumpers at the Clark Summit Bridge (Freedom Bridge), located in South Abington Township, Lackawanna County. The Pennsylvania Turnpike Commission and the Pennsylvania State Police met to discuss preventative measures, which resulted in suicide prevention phones being installed in the vicinity of the bridge. The phones, located on the northbound and southbound sides of the roadway, are connected to a Crisis Intervention Center.”

*Suicides tarnish the Golden Gate*

China Daily News- May 2, 2005

[http://www.chinadaily.com.cn/english/doc/2005-02/03/content\\_414735.htm](http://www.chinadaily.com.cn/english/doc/2005-02/03/content_414735.htm) (click “cancel” when asked to load language packs)

“Over the years officials have made moves against suicides, including adding crisis-counseling telephones on the bridge in 1994. Bridge patrols were started in 1996 (see: <http://www.cnn.com/US/9612/30/gold.gate.suicide/>). The span also has security cameras. But all of these countermeasures have not stopped the steady flow of desperate people from jumping off. Only a handful have survived.”

### **Lighting, Mass Detectors, Loudspeakers for Two-way Communication**

*Help for Life: Quebec's Strategy for Preventing Suicide*

<http://ftp.msss.gouv.qc.ca/publications/acrobat/f/documentation/1997/97-237-a.pdf>

Scroll to .pdf page 77: Two Examples of Action to Deal With Instruments of Suicide.

The trestle railroad bridge in Cap-Rouge:

“We often assume that measures taken to increase control over the instruments used to commit suicide will have little effect on the number of attempts, in the belief that their determination will simply lead attempters to choose another mean. This is not necessarily true. We wish to describe here the efforts made to better control access to the CN railroad bridge in Cap-Rouge, a municipality located in the suburbs of Québec City. Nine people, eight of them under 21, jumped off the bridge to their death between 1991 and 1996. A report by Coroner Louise Nolet highlighted the steps that had to be taken to improve surveillance of this site, which had acquired almost symbolic status. These steps were particularly important since a high school and a youth centre were located nearby.

“A surveillance system was set up including :

- a lighting system providing the equivalent of full daylight;
- surveillance cameras at both ends of the bridge;
- mass detectors;
- loudspeakers making two-way communication possible in real-time with anyone on the bridge.

“This surveillance system was installed through a cooperative effort involving the City of Cap-Rouge, Canadian National and Entreprises Microtec. The Sainte-Foy police department also works with Canadian National as a

primary resource in a crisis situation. The Québec SPC, the Laurentien and Sainte-Foy–Sillery CLSCs and the Découvreurs school board also participated in the organization of meetings held to set up suicide prevention/postvention committees in the elementary and secondary schools on the territory.”

### **Employee Training**

*Golden Gate Bridge Highway and Transportation District*

Report of the Building and Operating Committee/Committee of the Whole, Jan. 27, 2005

[http://goldengate.org/organization/c/board/2005\\_meetings/Minutes/bo050127m.html](http://goldengate.org/organization/c/board/2005_meetings/Minutes/bo050127m.html)

Scroll to Item 2: Staff Presentation Regarding History of District Activities Relative to Golden Gate Bridge Suicide Deterrent Systems.

Employee Training – “Bridge security personnel and several ironworkers have received special training from San Francisco Suicide Prevention Inc., and a nationally-renowned expert in crisis intervention and suicide prevention.”

### **General**

*The Dark Side of the Brooklyn Bridge*

New York University News Service, Dec. 15, 2004

<http://journalism.nyu.edu/pubzone/livewire/000233.php>

“The New York Department of Transportation, which is responsible for the maintenance and reconstruction of the bridge, does not seem intent on limiting the bridge’s accessibility. Its 2002 Bridges and Tunnels report listed a seismic retrofit to be completed in 2013, and the replacement of travelers (wire rope loops that connect the two towers), with a state-of-the-art technology system for 2006 as part of the bridge’s innovations. But it mentioned nothing about installing more fences or other suicide prevention measures.”

*Bridge operator not responsible for suicide jump*

Appellate Decisions Noted, August 2004, Vol. 10 / No. 3

<http://www.appellate-counsellor.com/newsletter/0408.htm#Milligan>

“The First District Court of Appeal in San Francisco has ruled that the operator of the Golden Gate bridge cannot be held liable for the suicide of a 14-year-old girl. The bridge is safe when used with due care.”